

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

CONSTRUCTION CODE

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(By authority conferred on the director of the department of licensing and regulatory affairs by section 4 of 1972 PA 230, MCL 125.1504, and Executive Reorganization Order Nos. 2003-1, 2008-4 and 2011-4 MCL 445.2011, 445.2025, and 445.2030)

R 408.30701, R 408.30711, R 408.30715, R 408.408.30717, R 408.30718, R 408.30719, R 408.30720, R 408.30757, and R 408.30791 of the Michigan Administrative Code are amended, R 408.30714, R 408.30726, R 408.30729, and R 408.30755, are added and R 408.30757a is rescinded to the Code as follows:

PART 7. PLUMBING CODE

AMENDMENTS AND ADDITIONS TO BASIC PLUMBING CODE

R 408.30701 Applicable code.

Rule 701. Rules governing the installation, replacement, alteration, relocation, and use of plumbing systems or plumbing materials shall be those contained in the international plumbing code, ~~2015~~**2018** edition, including appendices A, B, C, D, E, F, **and G**, ~~and HF~~, except for sections 102.10, 102.11, **103.1 to 103.3**,~~103.4, 103.4.1, 104.2, 104.5 to 104.7, 105.1, 105.3 to 105.3.3, 106.1.1, 106.1.2, 106.3, 106.3.2, 106.3.3, 106.5.5, 106.6.1, 106.6.2, 106.6.3, 107.2.5, 107.2.5.1, 107.2.5.2, 107.2.5.3, 108.3, 108.5, 109.1, 109.2 to 109.7, 312.1.1, 404.2, 404.3, 405.3.1, 602.3 to 602.3.5.1, 608.17 to 608.17.8, 608.18 to 608.18.8, 712.3.3.1, 712.3.3.2, 715.1 to 715.4, 802.4.3.1, 716.1 to 716.4, 717.1 to 717.8, 1106.3, 1106.6, 1301 to 1304.4.2, 1401 to 1403.2.1 and tables 608.18.1, 1106.3, and 1106.6. With the exceptions noted, the code is adopted in these rules by reference. All references to the International Building Code, International Residential Code, International Energy Conservation Code, International Electrical Code, International Mechanical Code, and International Plumbing Code mean the Michigan Building Code, Michigan Residential Code, Michigan ~~Uniform~~ Energy Code, Michigan Electrical Code, Michigan Mechanical Code, and Michigan Plumbing Code respectively. The code is available for inspection at the Lansing office of the Michigan department of licensing and regulatory affairs, bureau of construction codes. The code may be purchased from the International Code Council, through the bureau's website at www.michigan.gov/bcc ~~\$76.00~~**\$83.00** each.~~

R 408.30711 Title and scope.

Rule 711. Sections 101.1, ~~and 101.2~~, **and 101.3** of the code are amended to read as follows:

101.1. Title. This part shall be known as the Michigan plumbing code and is hereinafter referred to as "the plumbing code" or "the code." This part shall control all matters

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concerning the installation, replacement, alteration, relocation, and use of plumbing systems or plumbing materials as herein defined and shall apply to existing or proposed buildings and structures in the state.

101.2. Scope. The design and installation of plumbing systems, including sanitary and storm drainage, sanitary facilities, medical gas systems, water supplies, water service, and storm water and sewage disposal in and exiting buildings, shall comply with the requirements of the code. The design and installation of gas piping, chilled water piping in connection with refrigeration process and comfort cooling, and hot water piping in connection with building heating systems shall conform to the Michigan mechanical code. The design and installation of all fire sprinkler systems and standpipe systems shall conform to the Michigan building code. Water and drainage connections to such installations shall be made in accordance with the requirements of the code.

Exception: Detached 1-and 2-family dwellings and multiple single-family dwellings (townhouses) not more than 3 stories high with separate means of egress and their accessory structures shall comply with the Michigan residential code.

101.3. Intent. The purpose of this code is to establish minimum standards to provide a reasonable level of safety, health, property protection and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems. The Act takes precedence over all provisions of this code.

R 408.30714 Temporary equipment, systems and uses

Rule 714. Section 110.1 of the code is amended to read as follows:

110.1. General. The code official is authorized to issue a permit for temporary equipment, systems, and uses. Such permits shall be limited as to time of service but shall not be permitted for more than 180 days. The authority having jurisdiction may grant a 180-day extension of the original permit time period of 180 days, upon presentation by the permittee of a satisfactory reason for failure to start or complete the work or activity authorized by the permit.

R 408.30715 Permits.

Rule 715. Sections 106.4, 106.5.3, and 106.5.4 of the code are amended to read as follows:

106.4. By whom application is made.

~~(1) Application for a permit shall be made by a plumbing contractor licensed in accordance with 2002 PA 733, MCL 338.3511 to 338.3569.~~

~~—Exceptions:~~

~~1. Water service permits.~~

~~2. Building sewer and private sewer permits.~~

~~3. Minor repair.~~

~~(2) A plumbing contractor shall do both of the following:~~

~~(a) Be active in the business of serving the public as a plumbing contractor in a county, city, village, or township in this state.~~

~~(b) Operate 1 or more branches in this state bearing the same firm name, where a licensed master plumber is in charge and has the responsibility of supervision at each branch. The names of the authorized master plumbers representing a firm shall be on record with the state plumbing board.~~

~~–(3) To become a plumbing contractor, an applicant shall file an application on a form furnished by the state plumbing board and file with the board at Lansing, Michigan. An incomplete application will be returned to the applicant.~~

106.5.3. Expiration. Each permit issued by the code official under the provisions of the code shall expire by limitation and become null and void if the work authorized by this permit is not commenced within 180 days from the date of such permit, or if the work authorized by this permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before this work may be recommenced, the permit shall be reinstated if the code has not changed. If the code has changed and the work was not started, a new permit shall be first obtained for such work, provided no changes have been made or will be made in the original construction document for this work and provided further that the suspension or abandonment has not exceeded 1 year.

~~106.5.4. Extensions. Any permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The code official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. No permit shall be extended more than once.~~ **Application and extensions. The authority having jurisdiction may grant a 180-day extension of the original permit time period of 180 days, upon presentation by the permittee of a satisfactory reason for failure to start or complete the work or activity authorized by the permit.**

R 408.30716 Fees.

Rule 716. Section 106.6 of the code is amended to read as follows:

Rule 106.6. Fees. The fees prescribed by the act shall be paid to the enforcing agency of the jurisdiction before a permit to begin work for new construction, alteration, removal, demolition, or other building operation may be issued. In addition, an amendment to a permit necessitating an additional fee shall not be approved until the additional fee is paid.

R 408.30717 ~~Duties and powers of code official~~ **Right of entry.**

Rule 717. Section ~~104.1~~ **104.4** of the code is amended to read as follows:

~~104.1 General~~ **104.4 Right of entry.** ~~The code official shall enforce all of the provisions of the code and shall act on any question relative to the installation, alteration, repair, maintenance, or operation of all plumbing systems, devices, and equipment except as specifically provided for by statutory requirements or as provided for in sections 104.3 to 104.7.~~ **If building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the code official shall have recourse to every remedy provided by law to secure entry.**

R 408.30718 Violation penalties.

Rule 718. Section 108.4 of the code is amended to read as follows:

108.4. Violation penalties. A person who violates a provision of the code, who fails to conform with any of the requirements thereof, or who erects, installs, alters, or repairs

plumbing work in violation of the approved construction documents or directive of the enforcing agency, or a permit or certificate issued under the provisions of the code shall be assessed a fine in accordance with the act and 2002 PA 733, MCL 338.3511 to 338.3569 **may be subject to licensing action pursuant to the Skilled Trades Regulation Act, 2016 PA 407, MCL 339.5101 to 339.6133.**

R 408.30719 ~~Stop work orders~~ **Inspections and testing.**

Rule 719. ~~Section 108.5~~ **Sections 107.1 and 107.2.1** of the code is amended to read as follows:

~~108.5. Stop work orders.~~ **107.1. General.** Notice shall be in accordance with the act. A person who is served with a stop work order, except for work that the person is directed to perform to remove a violation or unsafe condition is subject to the penalty provisions prescribed by the act. **The code official is authorized to conduct such inspections as are deemed necessary to determine compliance with the provisions of this code.**

Construction or work for which a permit is required shall be subject to inspections by the code official, and such construction or work shall remain accessible and exposed for inspection purposes until approved. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

107.2.1. Inspection requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the code official when work is ready for inspection.

R 408.30720 ~~Means of appeal~~ **Violations.**

Rule 720. ~~Section 109.1~~ **108.4** of the code is amended to read as follows:

~~109.1 Means of appeal.~~ **108.4. Violation penalties.** An interested person may appeal a decision of the enforcing agency to the board of appeals in accordance with the act. An application for appeal shall be based on a claim that the true intent of the code or the rules governing construction have been incorrectly interpreted, the provisions of the code do not apply, or an equal or better form of construction is proposed. The decision of a local board of appeals may be appealed to the construction code commission in accordance with the act and time frames. **A person who violates a provision of the code, who fails to conform with any of the requirements thereof, or who erects, installs, alters, or repairs plumbing work in violation of the approved construction documents or directive of the enforcing agency, or a permit or certificate issued under the provisions of the code may be subject to licensing action pursuant to the Skilled Trades Regulation Act, 2016 PA 407, MCL 339.5101 to 339.6133.**

R 408.30721 **Required tests.**

Rule 721. Sections 309.3 and 312.1 of the code are amended and section 312.3 is added to read as follows:

309.3. Flood hazard areas subject to high-velocity wave action. Structures located in flood hazard areas subject to high-velocity wave action shall meet the requirements of section 309.2. The plumbing systems, pipes, and fixtures shall not be mounted on or penetrate through walls intended to break away under flood loads.

312.1. Required tests. The permit holder shall make the applicable tests prescribed in sections 312.2 to 312.10.2 to determine compliance with the code. The permit holder shall give reasonable advance notice to the code official when the plumbing work is ready for testing. The equipment, material, power, and labor necessary for the inspection and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in this rule. All plumbing system piping shall be tested with either water or, for piping systems other than plastic, by air. After the plumbing fixtures have been set and their traps filled with water, the entire drainage system shall be submitted to final tests. The code official shall require the removal of any cleanouts if necessary to ascertain if the pressure has reached all parts of the system.

Exception: Drainage and vent low pressure air tests for plastic piping systems shall be acceptable as prescribed in section 312.3 of the code.

312.3 Drainage and vent air test. An air test shall be made by forcing air into the system until there is a uniform gauge pressure of 5 psi (34.5 kPa) or sufficient to balance a 10-inch (254 mm) column of mercury. This pressure shall be held for a test period of not less than 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperatures or the seating of gaskets shall be made before to the beginning of the test period.

R 408.30722 Separate facilities.

Rule 722. Section 403.2 of the code is amended to read as follows:

403.2. Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for private facilities.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 50 or fewer.

R 408.30723 Distance of trap from vent.

Rule 723. Section 909.1 of the code is amended to read as follows:

909.1 Distance of trap from vent. Each fixture trap shall have a protecting vent located so that the slope and the developed length in the fixture drain from the trap weir to the vent fitting are within the requirements in table 909.1.

R 408.30725 Industrial or commercial wastes.

Rule 725. Section 302.2 of the code is amended to read as follows:

302.2. Industrial or commercial wastes. Industrial or commercial wastes shall not be introduced into the public sewer or private disposal system without receiving prior approval in the following manner:

- (a) Industrial or commercial wastes discharged to a public sewer system are subject to review, approval, and regulation by the owner of the sewage treatment system under the authority of the federal water pollution control act of 1972, as amended, 33 U.S.C. §1251 et

seq., and sections 3101 to 3119 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 to 324.3119 of the Michigan Compiled Laws.

(b) Industrial or commercial wastes discharged to an on-site disposal system are subject to review, approval, and regulation by the Michigan department of environmental quality under the authority of sections 3101 to 3119 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 to 324.3119 of the Michigan Compiled Laws.

(c) Industrial or commercial wastes discharged to an on-site holding tank are subject to review, approval, and regulation under sections 3101 to 3119, 11101 to 11152, and 12101 to 12118 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 to 324.3119, 324.11101 to 324.11152 and 324.12101 to 324.12118 of the Michigan Compiled Laws, and the federal resource conservation and recovery act of 1976, as amended, 42 U.S.C. §6901 et seq.

R 408.30725a Radioactive material.

Rule 725a. Section 302.2.1 is added to the code to read as follows:

302.2.1. Radioactive material. Possession of radioactive material is regulated by state or federal license. The disposal of radioactive material shall not create a hazard to operational or maintenance personnel of the institution or to the public. Radioactive waste disposal is controlled by the Michigan department of environmental quality by conditions for disposal in a radioactive material license issued under the authority of part 135 of Act No. 368 of the Public Acts of 1978, as amended, being §333.13501 et seq. of the Michigan Compiled Laws, and the ionizing radiation rules, being R 325.5001 et seq. of the Michigan Administrative Code, or is controlled by the United States nuclear regulatory commission by conditions for disposal in a license issued under the authority of the atomic energy act of 1954, 42 U.S.C. §2011 et seq.

R 408.30725c Venting of fixture drains.

Rule 725c. Section 909.2 of the code is amended to read as follows:

909.2. Venting of fixture drains. The vent for a fixture drain, except where serving a fixture with integral traps, such as water closets, shall connect above the weir of the fixture trap being vented. The total slope shall not exceed the diameter of the fixture drain.

R 408.30726 Building Sewer

Rule 726. Table 702.3 and section 703.1 of the code are amended to read as follows:

**Table 702.3
BUILDING SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall	ASTM D2661; ASTM F628; ASTM F1488; CSA B181.1
Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters, including SDR 42 (PS 20), PS 35, SDR 35	ASTM F1488; ASTM D2751

(PS 45), PS 50, PS 100, PS 140, SDR 23.5 (PS 150) and PS 200; with a solid, cellular core or composite wall.	
Cast-iron pipe	ASTM A74; ASTM A888; CISPI 301
Concrete pipe	ASTM C14; ASTM C76; CSA A257.1M; CSA A257.2M
Copper or copper-alloy tubing (Type K or L)	ASTM B75; ASTM B88; ASTM B251
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F714
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall	ASTM D2665; ASTM F891; ASTM F1488
Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140 and PS 200; with a solid, cellular core or composite wall.	ASTM F891; ASTM F1488; ASTM D3034; CSA B182.2; CSA B182.4
Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D. and a solid, cellular core or composite wall	ASTM D2949; ASTM F1488
Polyvinylidene fluoride (PVDF) plastic pipe	ASTM F1673; CSA B181.3
Stainless steel drainage systems, Types 304 and 316L	ASME A112.3.1
Vitrified clay pipe	ASTM C4; ASTM C700

For SI: 1 inch = 25.4 mm.

703.2 Drainage pipe in filled ground. Where a building sewer or building drain is installed on filled or unstable ground, the drainage pipe shall conform to one of the standards for ABS plastic pipe, cast-iron pipe, copper or copper-alloy tubing, PVC plastic pipe indicated in Table 702.3.

R 408.30728 Sewer depth.

Rule 728. Section 305.4.1 of the code is amended to read as follows:

305.4.1. Sewer depth. A building sewer that connects to a private disposal system shall be a minimum of 8 inches (203 mm) to the top of the pipe below finished grade at the point of septic tank connection. Building sewers shall be installed a minimum of 42 inches (1067 mm) below grade.

Exception: When permitted by the code official.

R 408.30729 Water service pipe.

Rule 729. Table 605.3 and section 609.3 of the code are amended to read as follows:

Table 605.3
Water Service Pipe

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D1527; ASTM D2282
Chlorinated polyvinyl chloride (CPVC) plastic pipe	ASTM D2846; ASTM F441; ASTM F442; CSA B137.6
Chlorinated polyvinyl chloride/aluminum/chlorinated polyvinyl chloride (CPVC/AL/CPVC)	ASTM F2855
Copper or copper-alloy pipe	ASTM B42; ASTM B302
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B75; ASTM B88; ASTM B251; ASTM B447
Cross-linked polyethylene (PEX) plastic pipe and tubing	ASTM F876; AWWA C904; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AS-PEX) pipe	ASTM F1281; ASTM F2262; B137.10
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F1986
Ductile iron water pipe	AWWA C151/A21.51; AWWA C115/A21.15
Polyethylene (PE) plastic pipe	ASTM D2239; ASTM D3035; AWWA C901; CSA B137.11
Polyethylene (PE) plastic tubing	ASTM D2737; AWWA C901; CSA B137.1
Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe	ASTM F1282; CSA B 137.9
Polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F2769; CSA B137.18
Polypropylene (PP) plastic pipe or tubing	ASTM F2389; CSA B137.11
Polyvinyl chloride (PVC) plastic pipe	ASTM D1785; ASTM D2241; ASTM D2672; CSA B137.3
Stainless steel pipe (Type 304/304L)	ASTM A312; ASTM A778
Stainless steel pipe (Type 316/316L)	ASTM A312; ASTM A778
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; ASTM F441; ASTM F442; CSA B137.6
Chlorinated polyvinyl chloride/aluminum/chlorinated polyvinyl chloride (CPVC/AL/CPVC)	ASTM F2855
Copper or copper-alloy pipe	ASTM B-42; ASTM B302; ASTM B43
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B75; ASTM B88; ASTM B251; ASTM B447
Cross-linked polyethylene (PEX) plastic tubing	ASTM F876; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	ASTM F1281; ASTM F2262; CSA B137.10
Cross-linked polyethylene/aluminum/high-	ASTM F1986

density polyethylene (PEX-AL-HDPE)	
Ductile iron pipe	AWWA C151/A21.51; AWWA C115/A21.15
Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pipe	ASTM F1282
Polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F2769; CSA B137.158
Polypropylene (PP) plastic pipe or tubing	ASTM F2389; CSA B137.11
Stainless steel pipe (Type 304/304L)	ASTM A312; ASTM A778
Stainless steel pipe (Type 316/316L)	ASTM A312; ASTM A778

609.3 Hot water. Hot water shall be provided to supply all of the hospital fixture, kitchen and laundry requirements. Special fixtures and equipment shall have hot water supplied at a temperature specified by the manufacturer. The hot water system shall be installed in accordance with section 607.

Exception: All healthcare hand wash sinks except for public hand wash sinks not used by patients, are permitted to have a maximum delivery temperature of 120 Fahrenheit. These sinks shall not be required to have individual water temperature limiting devices. Where hot water is supplied to health care hand wash sinks, the temperature shall be limited to 120 degrees Fahrenheit (49 degrees Celsius) by means of a temperature control device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70, CSA B125.3 or ASSE 1017.

R 408.30730 Sewer required.

Rule 730. Section 701.2 of the code is amended and section 701.9 is added to read as follows:

701.2. Sewer required. Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer, where available, or an approved private sewage disposal system.

701.9. Connections. Direct connection of a steam exhaust, blowoff, or drip pipe shall not be made with the building drainage system. Waste water where discharged into the building drainage system shall be at a temperature not greater than 140°F (60°C). Where higher temperatures exist, approved cooling methods shall be provided.

R 408.30731. Laundries.

Rule 731. Sections 1002.6 and 1003.6 of the code are amended to read as follows:

1002.6. Building traps. Building (house) traps shall be prohibited, except where local conditions necessitate these traps. Building traps shall be provided with a cleanout and a relief vent or fresh air intake on the inlet side of the trap. The size of the relief vent or fresh air intake shall not be less than ½ the diameter of the drain to which the relief vent or air intake connects. The relief vent or fresh air intake shall be carried above grade and shall be terminated in a screened outlet located outside the building.

1003.6. Laundries. Commercial laundries shall be equipped with an interceptor with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 0.5 inch (12.7 mm) or larger in size, string, rags, buttons, or other materials detrimental to the public sewage system.

R 408.30735 Hot water supply required.

Rule 735. Section 607.1 of the code is amended to read as follows:

607.1. Where required. (1) In residential occupancies, hot water shall be supplied to all plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry, or building maintenance. In nonresidential occupancies, hot water shall be supplied for culinary purposes, cleansing, laundry, or building maintenance purposes. In nonresidential occupancies, hot water or tempered water shall be supplied for bathing and washing purposes. Tempered water shall be supplied through a water temperature limiting device that conforms to ASSE 1070, and shall limit the tempered water to a maximum of 110 degrees Fahrenheit (43 degrees Celsius). This provision does not supersede the requirement for protective shower valves in accordance with section 424.3 of the code.

(2) Tempered water shall be supplied to bathing and hand washing facilities in the occupancies identified in the following by individual water temperature limiting devices to individual fixtures:

- (a) Elementary schools.
- (b) Child care centers.
- (c) Day care centers.
- (d) Nurseries.
- (e) Adult group homes.
- (f) Adult congregate homes.
- (g) Children's camps.
- (h) At accessible plumbing fixtures.

R 408.30741c Connections to automatic fire sprinkler systems and standpipe systems.

Rule 741c. Section 608.16.4 of the code is amended to read as follows:

608.16.4. Connections to automatic fire sprinkler systems and standpipe systems. The potable water supply to automatic fire sprinkler and standpipe systems shall be protected against backflow by a double check backflow prevention assembly, a double check fire protection backflow prevention assembly, or a reduced pressure principle fire protection backflow prevention assembly.

Exception: Isolation of the water distribution system is not required for deluge, preaction, or dry pipe systems.

R 408.30749 Special equipment; water supply protection.

Rule 749. Section 608.3.1 of the code is amended to read as follows:

608.3.1. Special equipment; water supply protection. The water supply for hospital fixtures shall be protected against backflow with a reduced pressure principle backflow prevention assembly, an atmospheric or spill-resistant vacuum breaker assembly, or an air gap. Vacuum breakers for bedpan washer hoses, autopsy tables, and hose connections in health care or laboratory areas shall not be located less than 6 feet (1829 mm) above the floor.

R 408.30753a Roof extensions.

Rule 753a. Section 903.1 of the code is amended to read as follows:

903.1. Roof extension. All open vent pipes that extend through a roof shall be terminated at least 1 foot (305 mm) above the roof, except that if a roof is to be used for any purpose

other than weather protection, then the vent extensions shall be run not less than 7 feet (2134 mm) above the roof.

R 408.30754a Frost Closure.

Rule 754a. Section 903.2 of the code is amended to read as follows:

Section 903.2. Frost Closure. To prevent frost closure, every vent extension through a roof shall be a minimum of 3 inches (76 mm) in diameter. Any increase in the size of the vent shall be made inside the building a minimum of 1 foot (305 mm) below the roof or inside the wall.

R 408.30754b Extensions outside a structure.

Rule 754b. Section 903.7 of the code is amended to read as follows:

903.7. Extensions outside a structure. Vent pipes installed on the exterior of the structure shall be protected against freezing by insulation or heat, or both.

R 408.30755 Storm drainage.

Rule 755. Table 1102.4 of the code is amended to read as follows:

**TABLE 1102.4
BUILDING STORM SEWER PIPE**

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall.	ASTM D2661; ASTM F628; ASTM F1488; CSA B181.1; CSA B182.1
Cast-iron pipe	ASTM A74; ASTM A888; CISPI 301
Concrete pipe	ASTM C14; ASTM C76; CSA A257.1M; CSA A257.2M
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B75; ASTM B88; ASTM B251; ASTM B306
Polyethylene (PE) plastic pipe	ASTM F667; ASTM F2306/F2306; ASTM F2648/F2548M
Vitrified clay pipe	ASTM C4; ASTM C700
Stainless steel drainage systems, Type 316L	ASME A112.3.1

R 408.30757 Horizontal drains within building and building sewers.

Rule 757. ~~Section~~**Sections** 708.3 and 708.3.1. of the code is amended **and section 708.3.4 is added to the code** to read as follows:

708.3 Where required. Cleanouts shall be located in accordance with sections 708.3.1, 708.3.3 to 708.3.5.

708.3.1. Horizontal drains within buildings and building sewers. All horizontal drains within buildings and building sewers shall be provided with cleanouts located not more than 100 feet (30 480 mm) apart.

For underground piping that is more than 10 inches in diameter, manholes shall be provided and located at every major change of direction, grade, elevation, or size of pipe or at intervals

of not more than 400 feet (12 1920 mm). Metal covers shall be provided for the manholes and shall be of sufficient weight to meet local traffic and loading conditions.

Within buildings, manhole covers shall be gastight and the manhole shall be vented with not less than a 4-inch (102 mm) pipe.

708.3.4. Base of stack. A cleanout shall be provided at the base of each waste or soil stack.

R 408.30757a ~~Discharge pipe and fittings~~**Rescinded.**

~~Rule 757a. Section 712.3.3 of the code is added to read as follows:~~

~~712.3.3. Discharge pipe and fittings. Discharge piping and fittings shall be constructed of approved materials.~~

R 408.30758 Minimum number of fixtures.

Rule 758. Sections 403.1 and 403.3.1 and Table 403.1 of the code are amended to read as follows:

403.1. Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined in accordance with the Michigan building code. Occupancy classification shall be determined in accordance with the Michigan building code.

Exceptions:

1. The actual number of occupants determined by a supporting affidavit from the owner or agency.

2. Hand washing sinks in food service establishments shall be provided in accordance with regulation no. 553, food establishments, R 285.553.1 to R 285.553.26 of the Michigan department of agriculture and rural development.

3. Toilet facilities for public swimming pools shall be provided in accordance with public swimming pools, R 325.2111 to R 325.2199 of the Michigan department of environmental quality.

4. Toilet facilities for child care center, day care center, and nursery school facilities shall be provided in accordance with child day care licensing – child care centers, R 400.8101 to R 400.8840 of the Michigan department of licensing and regulatory affairs.

5. Toilet facilities for children's camps shall be provided in accordance with children's and adult foster care camps, R 400.11101 to R 400.11413 of the Michigan department of licensing and regulatory affairs.

403.3.1. Access. The route to the public toilet facilities required by section 403.3 shall not pass through kitchens, storage rooms, or closets. Access to the required facilities shall be from within the building. All routes shall comply with the accessibility requirements of the Michigan building code. The public shall have access to the required toilet facilities at all times that the building is occupied.

TABLE 403.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a
 (See Sections 403.1.1 and 403.2)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN ^{e,f} (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
1	Assembly	A-1 ^d	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per 65	1 per 200			1 per 500	1 service sink
		A-2 ^d	Nightclubs, bars, taverns, dance halls, and buildings for similar purposes	1 per 40	1 per 40	1 per 75			1 per 500	1 service sink
			Restaurants, banquet halls and food courts	1 per 75	1 per 75	1 per 200			1 per 500	1 service sink
		A-3 ^d	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades, and gymnasiums	1 per 125	1 per 65	1 per 200			1 per 500	1 service sink
			Passenger terminals and transportation facilities	1 per 500	1 per 500	1 per 750			1 per 1,000	1 service sink
			Places of worship and other religious services.	1 per 150	1 per 75	1 per 200			1 per 1,000	1 service sink
		A-4	Coliseums, arenas, skating rinks, pools, and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150		1 per 1,000	1 service sink

		A-5 ⁱ	Stadiums, amusement parks, bleachers, and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 120 for the remainder exceeding 1,520	1 per 200	1 per 150		1 per 1,000	1 service sink
		A-5	Outdoor educational and municipal venues not larger than 3,000 spectators	1 per 125	1 per 65	1 per 200	1 per 150		1 per 1,000	1 service sink
2	Business	B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial, and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80			1 per 100	1 service sink ^g
3	Educational	E	Educational facilities	1 per 50		1 per 50			1 per 100	1 service sink
4	Factory and industrial	F-1 and F-2	Structures in which occupants are engaged in work fabricating, assembling, or processing of products or materials	1 per 100		1 per 100	(see Section 411)		1 per 400	1 service sink
5	Institutional	I-1	Residential care	1 per 10		1 per 10	1 per 8		1 per 100	1 service sink
		I-2	Hospitals, ambulatory nursing home patients, care recipient	1 per room c		1 per room c	1 per 15		1 per 100	1 service sink per floor
			Employees, other than residential care ^b	1 per 25		1 per 35			1 per 100	
			Visitors, other than residential care	1 per 75		1 per 100			1 per 500	

		I-3	Prisons ^b	1 per cell	1 per cell	1 per 15	1 per 100	1 service sink
			Reformatories, detention centers, and correctional centers ^b	1 per 15	1 per 15	1 per 15	1 per 100	1 service sink
			Employees ^b	1 per 25	1 per 35	-	1 per 100	-
		I-4	Adult day care and child care	1 per 15	1 per 15	1	1 per 100	1 service sink

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN ^{c,f} (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
6	Mercantile	M	Retail stores, service stations, shops, salesrooms, markets, and shopping centers	1 per 500		1 per 750		-	1 per 1000	1 service sink ^g
7	Residential	R-1	Hotels, motels, boarding houses (transient)	1 per sleeping unit		1 per sleeping unit		1 per sleeping unit		1 service sink
		R-2	Dormitories, fraternities, sororities, and boarding houses (not transient)	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		R-2	Apartment house	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	-	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units
		R-3	Congregate living facilities with 16 or fewer persons	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink

		R-3	1 - and -2 family dwellings and lodging houses with 5 or fewer guestrooms	1 per dwelling unit	1 per dwelling unit	1 per dwelling unit	-	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per dwelling unit
		R-4	Congregate living facilities with 16 or fewer persons	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink
8	Storage ^h	S-1 S-2	Structures for the storage of goods, warehouses, storehouse, and freight depots. Low and Moderate Hazard.	1 per 100	1 per 100	See Section 411	1 per 1,000	1 service sink

- a. The fixtures shown are based on 1 fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by the *International Building Code*.
- b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
- c. A single-occupant toilet room with 1 water closet and one lavatory serving not more than 2 adjacent patient sleeping units shall be permitted where such room is provided with direct access from each patient room and with provisions for privacy.
- d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
- e. The minimum number of required drinking fountains shall comply with Table 403.1 and Chapter 11 of the International Building Code.
- f. Drinking fountains are not required for an occupant load of 15 or fewer.
- g.. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.
- h. Structures not designed for occupants or as an employee's regular working area, are not required to have toilet facilities.
- i. Water closets and lavatories in adjacent school buildings may be included in the required minimum fixture count, if they are located within a 500-foot walking distance to the stadium. Signage for the location of these rest rooms is required.

R 408.30762 Floor drains; public toilet rooms.

Rule 762. Section 412.5 is added to the code to read as follows:

412.5. Floor drains; public toilet rooms. In all public toilet rooms that contain a combination of 3 or more water closets or urinals, at least 1 approved floor drain shall be installed connecting to the sanitary system; however, stall urinals may serve as floor drains if the entire floor can be drained to the urinals.

R 408.30763 Floor drain; floor area.

Rule 763. Section 412.6 is added to the code to read as follows:

412.6. Floor drains according to floor area. In all toilet rooms in which floor drains are required, there shall be at least 1 floor drain for each 400 square feet (37m²) of floor area or major fraction thereof.

R 408.30777 Scope; water service; distance limits; method of installations.

Rule 777. Section 601.1 of the code is amended to read as follows:

601.1. Scope. The provisions of this article shall control the design and installation of water supply systems, both hot and cold. Refer to 1976 PA 399, MCL 325.1001 to 325.1023, for additional requirements on water supply systems pertaining to establishments that are subject to regulation or licensure, or both, by the department of environmental quality.

Compliance with the provisions of this article, however, does not relieve any person from complying with the additional requirements imposed upon water supply systems pursuant to authority vested in the Michigan department of environmental quality under 1976 PA 399, MCL 325.1001 to 325.1023, 1978 PA 368, MCL 333.1101 to 333.25211, and 1987 PA 96, MCL 125.2301 to 125.2350, or other applicable provisions of state law.

R 408.30785 Requirements for discharge piping.

Rule 785. Section 504.6 of the code is amended to read as follows:

504.6. Requirements for discharge piping. (1) Relief valves shall not discharge so as to be a hazard, a potential cause of damage, or a nuisance. A relief valve discharge pipe shall be provided for each individual relief valve and shall meet all of the following:

(a) Shall terminate atmospherically not more than 4 inches (1220 mm) from the floor with an unthreaded end.

(b) Shall not be interconnected.

(c) Valves shall not be connected in the relief valve discharge pipe.

(d) Shall be rigid pipe approved for water distribution, with a minimum temperature rating of 210 degrees Fahrenheit.

(e) Shall have the same nominal inside diameter as the relief valve outlet and shall drain by gravity flow.

(f) Shall discharge to the floor, to the pan serving the water heater or storage tank, or to a waste receptor.

(2) The outlet of a pressure, temperature or other relief valve shall not be directly connected to the drainage system.

R 408.30791 Definitions.

Rule 791. (1) Section 202 of the code is amended to amend the definition of code official and add the definitions of the act and plumbing contractor.

(2) "Act" means 1972 PA 230, MCL 125.1501 and known as the Stille-DeRossett-Hale single state construction code act.

(3) "Code official" means ~~the person appointed and employed by a governmental subdivision charged with the administration and enforcement of the state code or codes and registered in accordance with the requirements of 1986 PA 54, MCL 338.2301 to 338.2313~~ **the officer or other designated authority charged with the administration and enforcement of this code.**

(4) "Plumbing contractor" means a person who is licensed in accordance with 2002 PA 733, MCL 338.3511 to 338.3569.

R 408.30792 Food utensils, dishes, pots and pans sinks.

Rule 792. Section 802.1.8 of the code is amended to read as follows:

802.1.8. Food utensils, dishes, pots and pans sinks. Sinks used for the washing, rinsing, or sanitizing of utensils, dishes, pots, pans, or service ware where used in the preparation, serving, or eating of food shall discharge indirectly through an air gap or an air break to the drainage system.

Exception: When required, a washing sink or wash compartment shall be directly connected to a hydromechanical grease interceptor. The outlet of a hydromechanical grease interceptor shall directly connect to the sanitary drainage system.